

### ABSTRACT

A legged robot and a legged robot walking control method are disclosed, which enable stable walking without force sensors on leg tips. A legged robot of the present invention comprises a torso, a leg link, which is swingably connected to the torso, storing means 210 for storing leg tip gait data describing a time-series change in a target leg tip motion, storing means 210 for storing torso gait data describing a time-series change in a target torso motion, which realizes a target ZMP following the change in the target leg tip motion, torso motion detection means 218, 220 for detecting an actual torso motion, deviation calculation means 312 for calculating a deviation of the actual torso motion from the target torso motion, correction quantity calculation means 308 for determining a correction quantity from the calculated deviation based on a prescribed transfer function, and correction means 306 for correcting the target torso gait data based on the determined correction quantity.